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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/802,027

03/17/2004

Yukio Shoji

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KRATZ, QUINTOS & HANSON, LLP
1420 K Street, N.W.
Suite 400
WASHINGTON, DC 20005

EXAMINER

DRODGE, JOSEPH W

ART UNIT

PAPER NUMBER

1797

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DELIVERY MODE

07/14/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/802,027	Applicant(s) SHOJI ET AL.	
	Examiner Joseph W. Drodge	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 12009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Support cannot be found in the Specification for amended recitations in claims 1 and 8 of the inflow chamber forcibly guiding the rising flow towards the surface of filter element. Thus the added limitations constitute New Matter.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action, amendments and clarifications to the rejections made in this Final office action are in bold-face and are underlined:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,3-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Strano et al patent 6,013,178. The reference discloses a filter comprising inflow chamber 44/16, outflow chamber 56/64, filter elements 26 of cylindrical or frustoconical form having inner and outer curved surfaces (column 2, lines 50-52) so as to occupy an annular space defining a hollow portion, the inflow chamber having a tapering guide structure defining first chamber 54 that guides flow from inlet 44 to the inner surfaces of filters 26 and comprising baffle 50 and plate or flange 46 and inner surface of depending top end plate 24 extending from bottom of end plate 32 to top of end plate 18 arranged such that substantially all fluid flows first axially and then

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radially towards the filter element, for claim 1, the flow being sprouted from the bottom portion of the inflow chamber in a rising flow. The flow path is narrowing, has a streamlined shape, extends substantially the entire length of the inflow chamber (figure 4) and forcibly guides per claims 3,5 and 6 (see figure 4). See bottom inlet 44 for claim 4.

Claims 1-3,5,6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Kamrath patent 1,922,688. The reference discloses a filter comprising inflow chamber 39, outflow chamber 27/40, filter element 34/35/36 of cylindrical or frustoconical form having inner and outer curved surfaces so as to occupy an annular space defining a hollow portion, the inflow chamber having a guide structure 24/25/28/27, that extends substantially the entire length of the filter structure arranged such that substantially all fluid flows first axially and then radially towards the filter element (figures 1 and 5) , for claim 1, the flow being sprouted from the bottom portion of the inflow chamber in a rising flow. The flow path is narrowing, has a streamlined shape and forcibly guides per claims 3,5 and 6 (figures 1 and 5). See upper inlet 38 for claim 2.

Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Campo patent 3,675,776. Campo discloses inflow chamber 22/A, outflow chamber 24/B, filter element 28 comprising a plurality of integral, immediately adjacent layers 60 and 61 that each comprise target trapping/adsorbing elements that act as fall-off preventing elements that are of dis-similar materials and hence are necessarily and inherently of different pore or mesh sizes (see column 3, lines 35-60). Claim 10 does not specify the particular orientation of the target trapping and falling-off element layers. Filter element layers may of material as diverse as plastic, activated carbon/charcoal and zeolite (column 3, lines 34-58). **Campo at column 5, lines 10-15 teaches to filter "many diverse fluids" with respective particular contaminants, thus tailored to**

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have properties such as pore size tailored to particular target material, that necessarily has a target size. Target pore or mesh sizes and other filtering properties are necessarily encompassed in the Campo disclosure “specific filtering materials may be inserted having material specifically suited for the removal of particular impurities” at column 5, lines 10-15.

The claims do not specify what the direction of flow is through the filter. Outer-most element 61 may constitute a fall-off preventing element for inner-most filter element layer 60, element 61 being on the inner side surface of the surrounding annular inflow path that directs fluid upwardly.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kamrath patent 1,922,688 in view of Kamrath patent 2,171,752. Claim 4 differs from '688 in requiring also a lower inlet who discloses the filter being an air filter for internal combustion engines. Kamrath '752 teaches a filter of similar structure and purpose having top inlet, flow diverting guide and also lower inlets 24 (column 2, lines 34-50). It would have been also obvious to one of ordinary skill in the filtration arts to have equipped '688 with such lower inlets, so as to separate out any air that is entrained with the initial downward flow of particles and liquid, as well as to wash out residual particles with swirling return currents of liquid.

Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamrath patent 1,922,688 in view of Rabbitt patent 2,655,894. These claims differ from '688 in requiring a differential pressure sensor. Rabbitt and Kamrath commonly are directed towards cylindrical air filters used in internal combustion engines, whereas Rabbitt teaches to equip the filter with a differential pressure sensor and indicator (column 2, lines 27-55). It would have been also obvious to one of ordinary skill in the filtration arts to have equipped '688 with such

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sensor/indicator in order to alert an operator of the need to replace or clean the filter when clogged.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Campo patent 3,675,776 in view of Kuh et al patent 4,681,677. Claim 11 also differs in requiring a differential pressure sensor to detect pressure differences between inflow chamber and outflow chamber. However, Kuh teaches a differential pressure sensor, whose details are discussed at (Abstract, column 3, lines 55-64). It would have been obvious to the ordinarily skilled artisan in the filtration arts, to have incorporated a differential pressure sensor of Budzich into the Sttuzman oil filtering device, to ensure timely changing of the filter element or filter element cleaning when it has become clogged and no longer provides adequate flow or filtration capacity.

Applicant's arguments filed on 7/10/2009 have been fully considered but they are not persuasive with the exception of Argument directed towards claim rejections over Dupure which are persuasive.

It is argued that the flow guide structures (5) of Strano et al and (18) of Kamrath et al do not extend the entire length of the corresponding filter structures. However, such guide structure of Strano comprises the entire inflow chamber 54 of Strano and various elements including surface 24, defining such inflow chamber, as apparent from figure 4 which extend the length of the filter elements. Similarly, guide elements including 25 and 27 of Kamrath extend from bottom to top of the filter element(s).

It is argued, for claim 10, that flow in Campo near the filter elements flows in two different directions through the two layers of the filter elements, thus there can be no

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arrangement of filter elements in regard to mesh size, target size and flow direction. It is submitted that there is no claim language correlating structure relative to flow direction, especially to limiting flow to a single direction; thus the argument is not commensurate with text of claim language.

It is argued that Campo does not teach specific mesh sizes relative to a “target size” of a target foreign matter. However, it is submitted that target pore or mesh sizes and other filtering properties are necessarily encompassed in the Campo disclosure “specific filtering materials may be inserted having material specifically suited for the removal of particular impurities” at column 5, lines 10-15.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Drodge at his direct government telephone number of 571-272-1140. The examiner can normally be reached on Monday-Friday from approximately 8:30 AM to 12:30 PM and 2:00 PM to 6:00 PM.

Additionally, the examiner’s supervisor, Duane Smith, of Technology Center Unit 1797, can be reached at 571-272-1166.

The formal facsimile phone number, for official, formal communications, for the examining group where this application is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more

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information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD

July 10, 2009

/Joseph W. Drodge/

Primary Examiner, Art Unit 1797